

NAFA SERIES

SPRING RETURN DAMPER ACTUATOR

2 Point Spring Return Control
3 Nm

NENUTE[®]EC

INNOVATIVE MEMBER OF SWIS⁺TEC

NAFA SERIES

SPRING RETURN DAMPER ACTUATOR

2 Point Spring Return Control
3 Nm

NAFA...03 (S) SERIES

NAFA series Spring Return actuators are developed for general air damper application, rotary valve and other devices which require a fail-safe function. During normal operation, the actuator motorized the device. In the event of power outage, the actuator springs back to its original position.



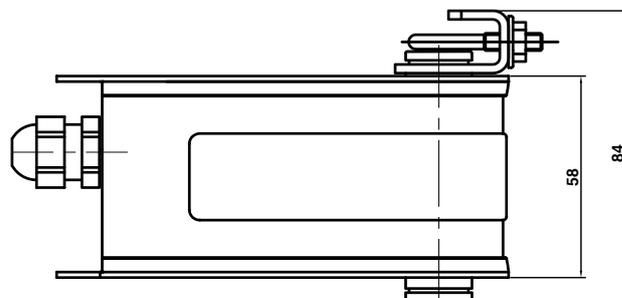
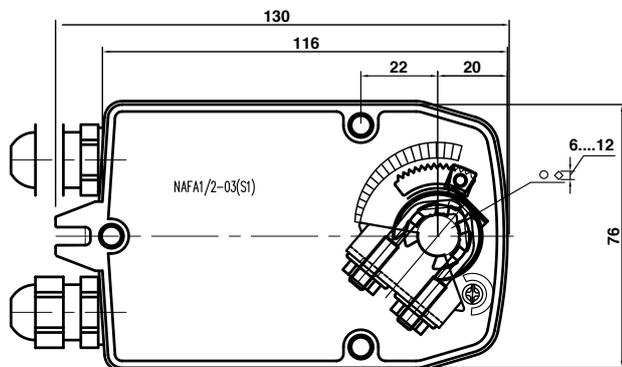
PRODUCT FEATURE

- Torque 3 Nm
- Damper size 0.6 m²
- Power supply AC/DC 24V and AC 230 V
- Shaft dimensions - Ø 10...16 mm / □ 7...11 mm
- Minimum Shaft Length 40 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Actuator with 1 m cable connection
- Optional 1 Fixed and 1 Adjustable SPDT auxiliary switches

MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NAFA 1-03	3 Nm	AC/DC 24 V ± 10%	25...55 sec (Spring Back <20 sec)	-
NAFA 1-03S	3 Nm	AC/DC 24 V ± 10%	25...55 sec (Spring Back <20 sec)	2 x SPDT (Fixed & Adjustable)
NAFA 2-03	3 Nm	AC 230 V ± 10%	25...55 sec (Spring Back <20 sec)	-
NAFA 2-03S	3 Nm	AC 230 V ± 10%	25...55 sec (Spring Back <20 sec)	2 x SPDT (Fixed & Adjustable)

DIMENSION (mm)



TECHNICAL SPECIFICATION

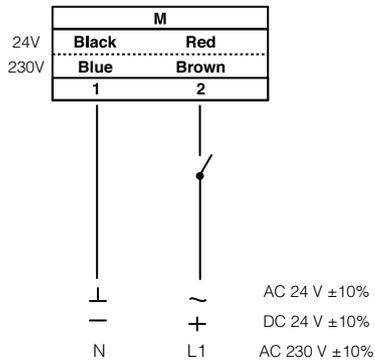
MODEL NUMBER	NAFA 1-03 (S)	NAFA 2-03 (S)
TORQUE	3 Nm	3 Nm
DAMPER SIZE	0.6 m ²	0.6 m ²
SHAFT DIMENSION	Ø 10...16 mm / □ 7...11 mm	Ø 10...16 mm / □ 7...11 mm
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2 point control	2 point control
POWER CONSUMPTION		
● OPERATING	7.2 W	7.2 W
● END POSITION	1.2 W	1.2 W
FOR WIRE SIZING	10.0 VA	10.0 VA
ELECTRICAL CONNECTION	1 m Cable	1 m Cable
AUXILIARY SWITCH RATING	2 (1.5) A, AC 250 V	2 (1.5) A, AC 250 V
PROTECTION CLASS	Class III ⚡	Class II ⚡
ANGLE OF ROTATION	90° (95° mechanical)	90° (95° mechanical)
WEIGHT	1.8 Kg	1.9 Kg
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	40 dB	40 dB
IP PROTECTION	IP54	IP54
OPERATING TEMPERATURE	-20°...50° as per IEC 721-3-3	-20°...50° as per IEC 721-3-3
NON-OPERATING TEMPERATURE	-30°...+60° C / IEC 721-3-2	-30°...+60° C / IEC 721-3-2
AMBIENT HUMIDITY	5%...95% rH non condensing / EN	5%...95% rH non condensing / EN
MAINTENANCE	Maintenance Free	Maintenance Free
MODE OF OPERATION	Type I / EN 60730-1	Type I / EN 60730-1
EMC	CE & ISO 9000 EN / EEC	CE & ISO 9000 EN / EEC

NAFA SERIES SPRING RETURN DAMPER ACTUATOR

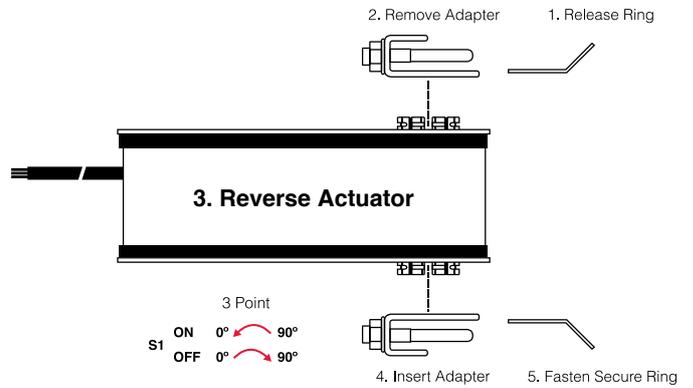
2 Point Spring Return Control

3 Nm

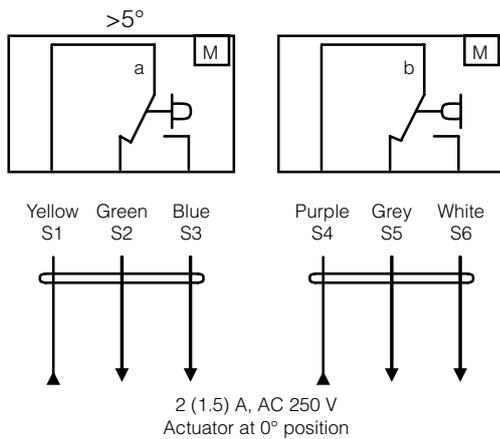
WIRING DIAGRAM NAFA...03 (S) POWER SUPPLY AC/DC 24 V / AC 230V



CHANGING DIRECTION OF ROTATION NAFA...03 (S)



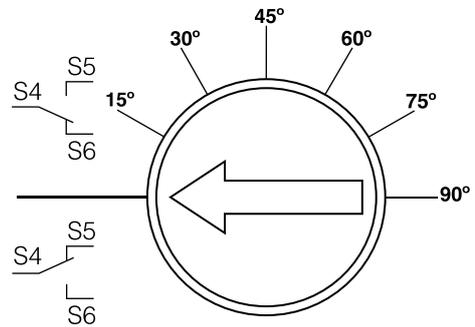
WIRING DIAGRAM NAFA...03 (S) AUXILIARY SWITCH



AUXILIARY SWITCH NAFA...03 (S)

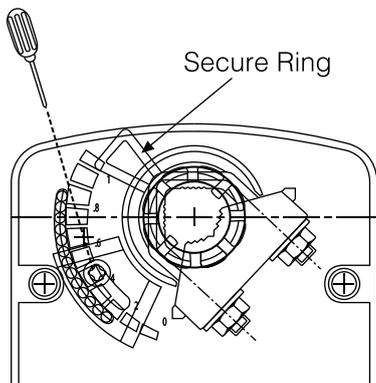
Switch **a** factory-set at 5°.

The auxiliary switch can be optimally adjusted between 0°...90°.



Switch **a** factory set at 5°
Switch **b** adjustable 0°...90°

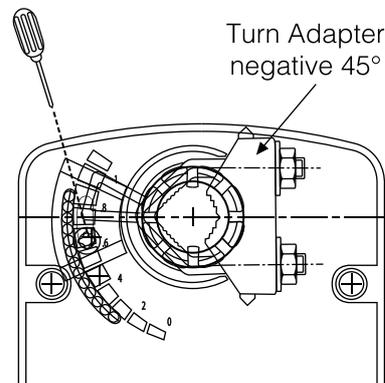
ANGLE OF ROTATING LIMITING 5°...85° ADJUSTMENT



For 5°...45° Adjustment
(Diagram 1)

For 5°...45° Adjustment (Diagram 1)

- ① Loosen screw of the mechanical limiter plate.
- ② Move the limiter plate to the appropriate position.
- ③ Tighten the screw.

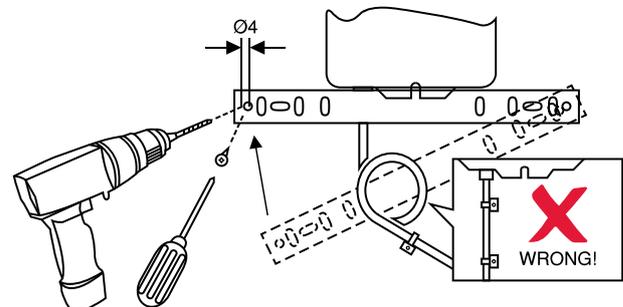
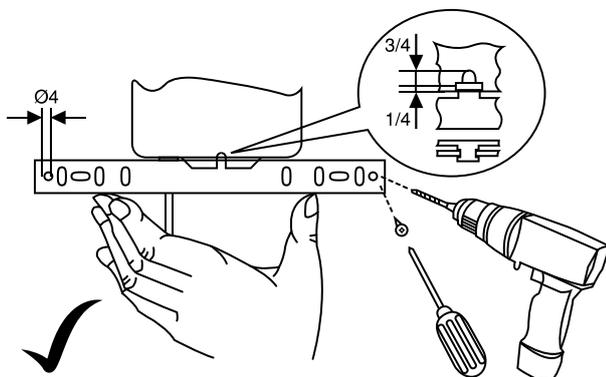


For 45°...85° Adjustment
(Diagram 2)

For 45°...85° Adjustment (Diagram 2)

- ① Release the secure ring of the adapter.
- ② Remove the adapter and turn negative 45° as shown.
- ③ Insert adapter and secure the adapter.
- ④ Loosen screw of the mechanical limiter plate.
- ⑤ Move the limiter plate to the appropriate position.
- ⑥ Tighten the screw.

INSTALLATION / MOUNTING INSTRUCTION



IMPORTANT REMARK

For special requirement, consult your local Nenutec's representative.



This actuator includes electrical and electronic components and may not be disposed as household garbage. Please consider the local valid legislation.



AC / DC 24 V: Connect via safety isolating transformer.
AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

The performance specifications are nominal and conform to acceptable industry standards. Nenutec shall not be liable for damages resulting from misapplication or misuse of its products.

SWISS⁺
TECHNOLOGY

NECA SERIES
ELECTRONIC RETURN DAMPER ACTUATOR

2 Point Control

6 Nm

NENUTE[®]EC

INNOVATIVE MEMBER OF SWIS⁺TEC

NECA SERIES ELECTRONIC RETURN DAMPER ACTUATOR

2 Point Control
6 Nm

NECA...6 SERIES (S1)

NECA SERIES damper actuators with Electronic Return® (ER) function are designed and produced for extended functionalities in the HVAC Systems: air handling equipment, fan coils and laboratory applications. Electronic Return® (ER) is able to manage short voltage interruptions for max. 10 seconds.

PRODUCT FEATURE

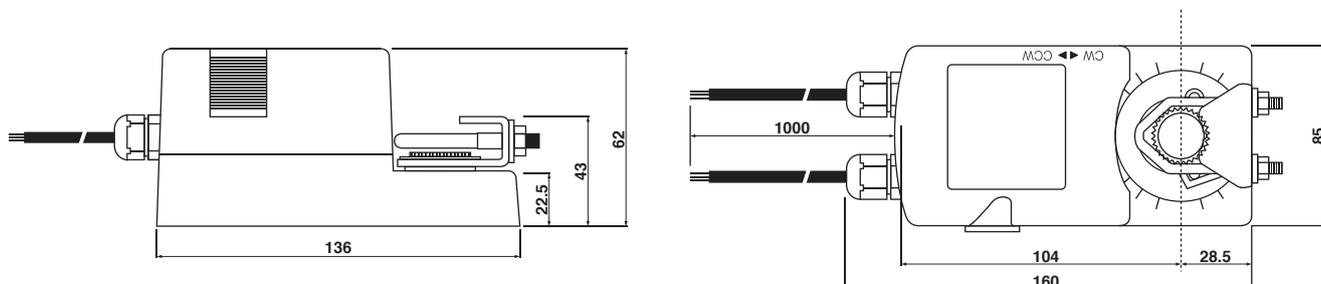


- Torque 6 Nm
- Damper size 2.0 m²
- Power supply AC/DC 24V and AC 230V
- Shaft dimensions - Ø 10...20 mm / □ 5...14 mm
- Minimum Shaft Length 40 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Actuator with 1 m cable connection
- Optional 1 Adjustable SPDT auxiliary switch
- Manual Over-ride push button when required

MODEL SELECTION TABLE

MODEL /TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	RETURN	AUXILIARY SWITCH
NECA 1-6	6 Nm	AC/DC 24V ± 10%	65...70 sec	40 sec	-
NECA 1-6S1	6 Nm	AC/DC 24V ± 10%	65...70 sec	40 sec	1 x SPDT (Adjustable)
NECA 2-6	6 Nm	AC 230V ± 10%	65...70 sec	40 sec	-
NECA 2-6S1	6 Nm	AC 230V ± 10%	65...70 sec	40 sec	1 x SPDT (Adjustable)

DIMENSION (mm)



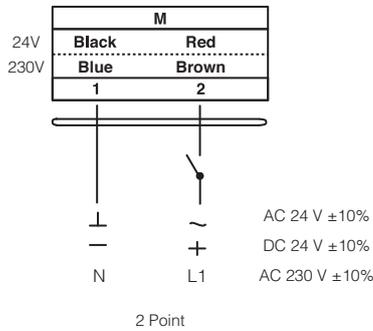
TECHNICAL SPECIFICATION

MODEL NUMBER	NECA 1-6 (S1)	NECA 2-6 (S1)
TORQUE	6 Nm	6 Nm
DAMPER SIZE	2.0 m ²	2.0 m ²
SHAFT DIMENSION	Ø 10...20 mm / □ 5...14 mm	Ø 10...20 mm / □ 5...14 mm
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2 point control	2 point control
POWER CONSUMPTION		
● OPERATING	7.2 W	7.2 W
● END POSITION	1.2 W	1.2 W
FOR WIRE SIZING	10.0 VA	10.0 VA
ELECTRICAL CONNECTION	1 m Cable	1 m Cable
AUXILIARY SWITCH RATING	3 (1.5) A / AC 250 V	3 (1.5) A / AC 250 V
PROTECTION CLASS	Class III ⚡	Class II ⚡
ANGLE OF ROTATION	90° (95° mechanical)	90° (95° mechanical)
WEIGHT	1.8 Kg	1.8 Kg
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	< 45 dB (A)	< 45 dB (A)
IP PROTECTION	IP54	IP54
OPERATING TEMPERATURE	-20°...50° as per IEC 721-3-3	-20°...50° as per IEC 721-3-3
NON-OPERATING TEMPERATURE	-30°...+60° C / IEC 721-3-2	-30°...+60° C / IEC 721-3-2
AMBIENT HUMIDITY	5%...95% rH non condensing / EN	5%...95% rH non condensing / EN
MAINTENANCE	Maintenance Free	Maintenance Free
MODE OF OPERATION	Type I / EN 60730-1	Type I / EN 60730-1
EMC	CE & ISO 9000 EN / EEC	CE & ISO 9000 EN / EEC

NECA SERIES ELECTRONIC RETURN DAMPER ACTUATOR

2 Point Control
6 Nm

WIRING DIAGRAM NECA...6 (S1) POWER SUPPLY AC/DC 24 V / AC 230V

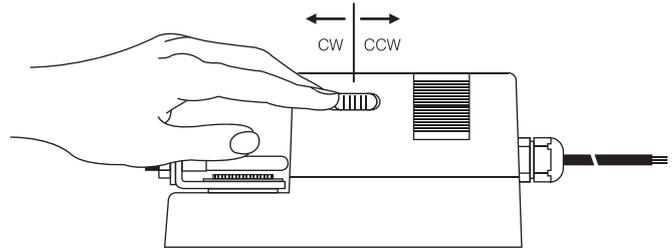


⚠ Connect via safety isolating transformer

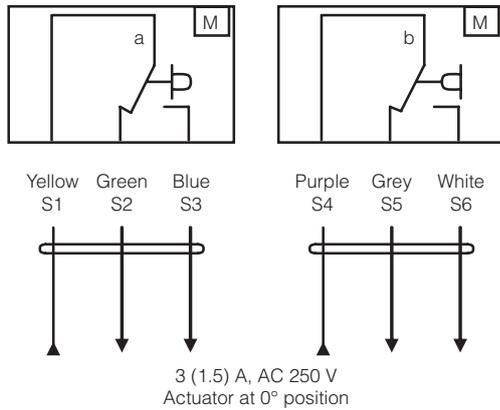
DIRECTION OF ROTATION NECA...6 (S1)

Default factory setting: CW.

Direction of rotation can be change by toggling between CW/CCW switch on the actuator's housing.



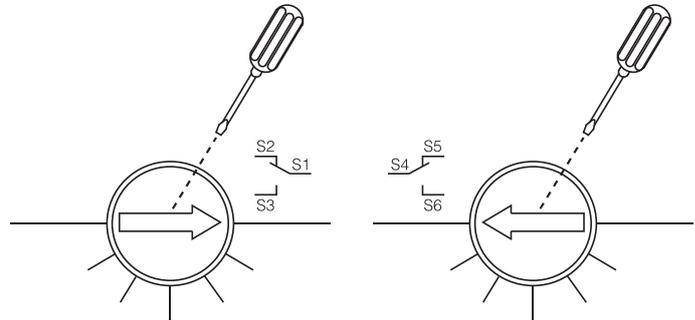
WIRING DIAGRAM NECA...6 (S1) AUXILIARY SWITCH



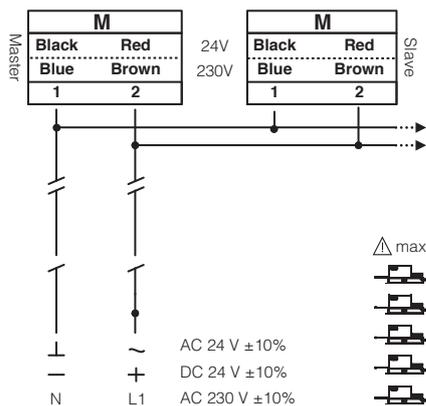
AUXILIARY SWITCH NECA...6 (S1)

Switch **a** factory-set at 5° and 85°.

The auxiliary switch can be optimally adjusted between 0°...90°.



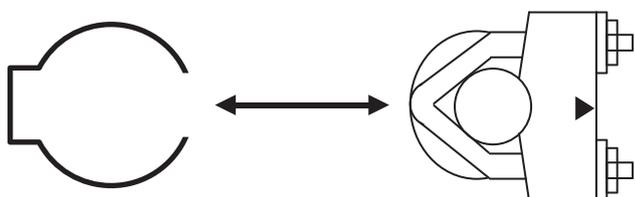
WIRING DIAGRAM NECA...6 (S1) PARALLEL CONNECTION



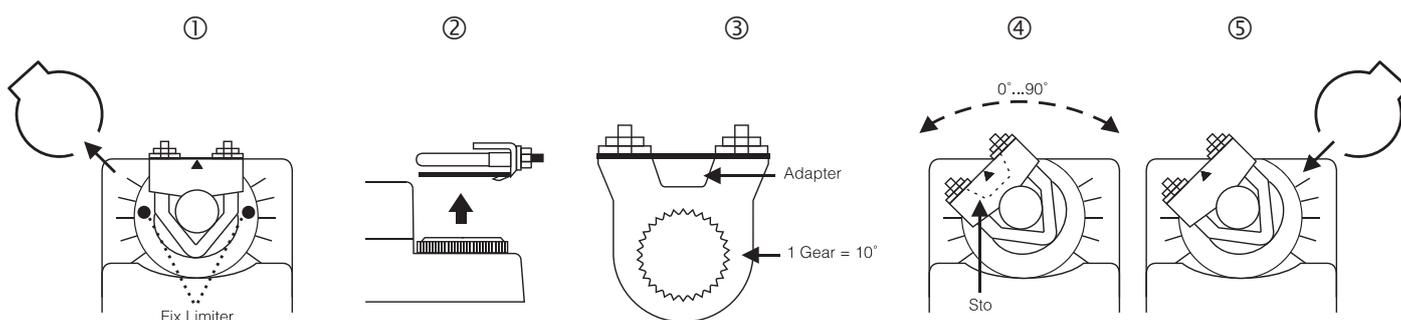
REMARK

Parallel connection of NECA...6 actuators are limited to 5. Power consumption must be observe.

RELEASING THE ADAPTER NECA...6 (S1)



LIMITING ANGLE OF ROTATION NECA...6 (S1)



IMPORTANT REMARK

For special requirement, consult your local NenuTec's representative.

  This actuator includes electrical and electronic components and may not be disposed as household garbage. Please consider the local valid legislation.

 AC / DC 24 V: Connect via safety isolating transformer.
AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

The performance specifications are nominal and conform to acceptable industry standards. NenuTec shall not be liable for damages resulting from misapplication or misuse of its products.

SWISS⁺
TECHNOLOGY

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ELECTRONIC RETURN DAMPER ACTUATOR

Modulating Control
6 Nm

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NECM SERIES ELECTRONIC RETURN DAMPER ACTUATOR

Modulating Control
6 Nm

NECM...6 SERIES

NECM series actuators with Electronic Return® (ER) function are designed and produced for extended functionalities in HVAC systems: air handling equipment, fan coils and laboratory applications. Electronic Return® (ER) is able to manage short voltage interruptions for max. 10 seconds.



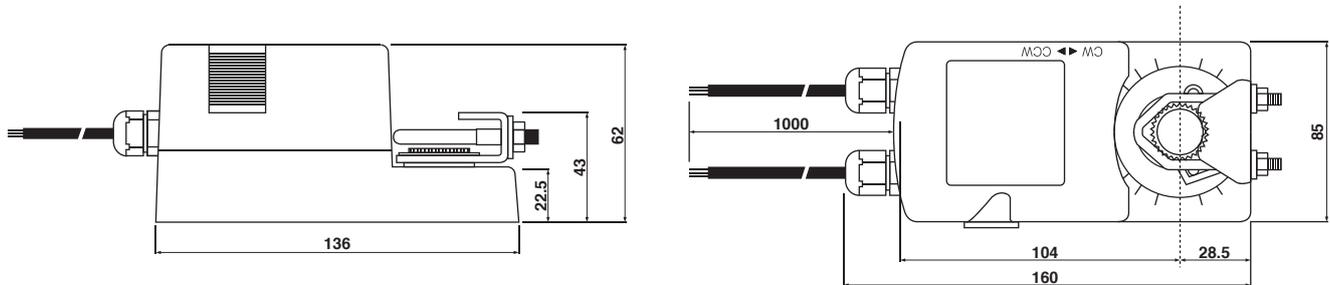
PRODUCT FEATURE

- Torque 6 Nm
- Damper size 2.0 m²
- Power supply AC/DC 24V
- Control Modulating Signal DC 0(2)...10 V / 0(4)...20 mA
- Shaft dimensions - Ø 10...20 mm / □ 5...14 mm
- Minimum Shaft Length 45 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Actuator with 1 m cable connection
- Manual Over-ride push button when required

MODEL SELECTION TABLE

MODEL /TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	RETURN	AUXILIARY SWITCH
NECM 1.1-6	6 Nm	AC/DC 24V ± 10%	65...70 sec	40 sec	-
NECM 1.1-6S	6 Nm	AC/DC 24V ± 10%	65...70 sec	40 sec	1 x SPDT (Adjustable)

DIMENSION (mm)



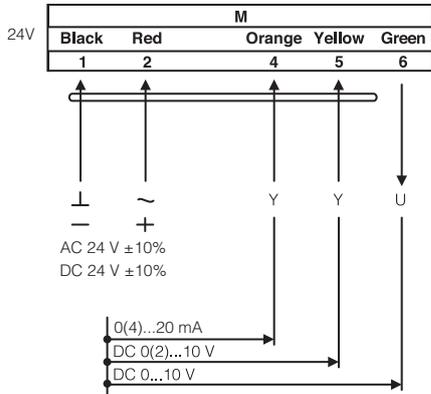
TECHNICAL SPECIFICATION

MODEL NUMBER	NECM 1.1-06 (S)
TORQUE	6 Nm
DAMPER SIZE	2.0 m ²
SHAFT DIMENSION	Ø 10...20 mm / □ 5...14 mm
POWER SUPPLY	AC/DC 24 V ± 10%
FREQUENCY	50...60 Hz
CONTROL SIGNAL (INPUT)	DC 0(2)...10 V, 0(4)...20 mA
POSITION SIGNAL (OUTPUT)	DC 0...10 V
POWER CONSUMPTION	
● OPERATING	7.2 W
● END POSITION	1.2 W
FOR WIRE SIZING	10.0 VA
ELECTRICAL CONNECTION	1 m Cable
AUXILIARY SWITCH RATING	3 (1.5) A / AC 250 V
PROTECTION CLASS	Class III ⚡
ANGLE OF ROTATION	90° (95° mechanical)
WEIGHT	< 1.0 Kg
LIFE CYCLE	60,000 Rotation
SOUND LEVEL	40 dB
IP PROTECTION	IP54
OPERATING TEMPERATURE	-20°...50° as per IEC 721-3-3
NON-OPERATING TEMPERATURE	-30°...+60° C / IEC 721-3-2
AMBIENT HUMIDITY	5%...95% rH non condensing / EN
MAINTENANCE	Maintenance Free
MODE OF OPERATION	Type I / EN 60730-1
EMC	CE & ISO 9000 EN / EEC

NECM SERIES ELECTRONIC RETURN DAMPER ACTUATOR

Modulating Control
6 Nm

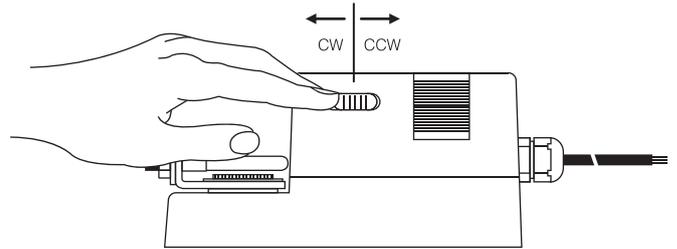
WIRING DIAGRAM NECM...6 (S) POWER SUPPLY AC/DC 24V



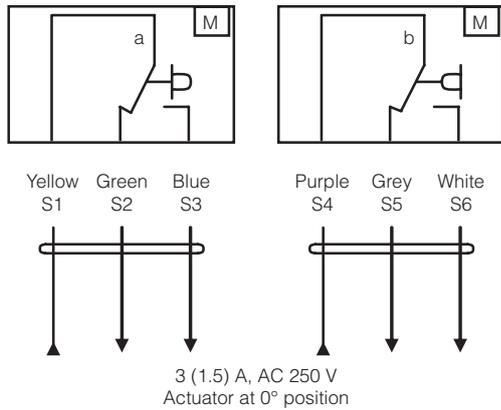
DIRECTION OF ROTATION NECM...6 (S)

Default factory setting: CW.

Direction of rotation can be changed by toggling between CW/CCW switch on the actuator's housing.



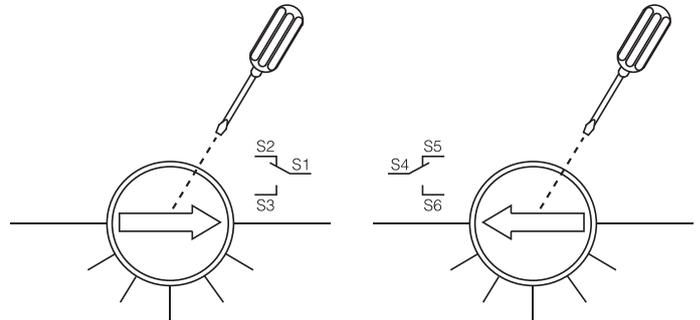
WIRING DIAGRAM NECM...6 (S) AUXILIARY SWITCH



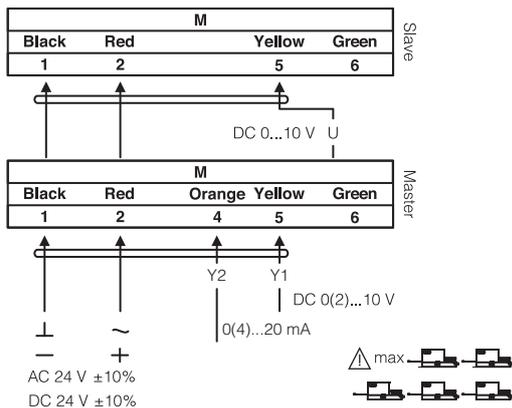
AUXILIARY SWITCH NECM...6 (S)

Switch **a** factory-set at 5° and 85°.

The auxiliary switch can be optimally adjusted between 0°...90°.



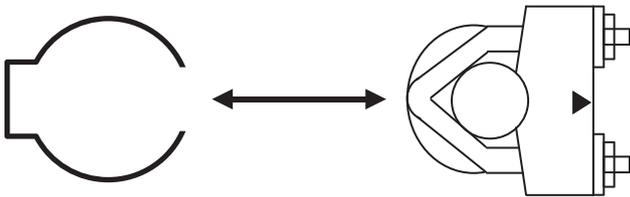
WIRING DIAGRAM NECM...6 (S) PARALLEL CONNECTION



REMARK

During parallel operation, the output signal (terminal 6, DC 0...10 V) of the master actuator must be connected to terminal 5 of the next slave actuator.

RELEASING THE ADAPTER NECM...6 (S)



Adjusting Control Signals NECM...6 (S)

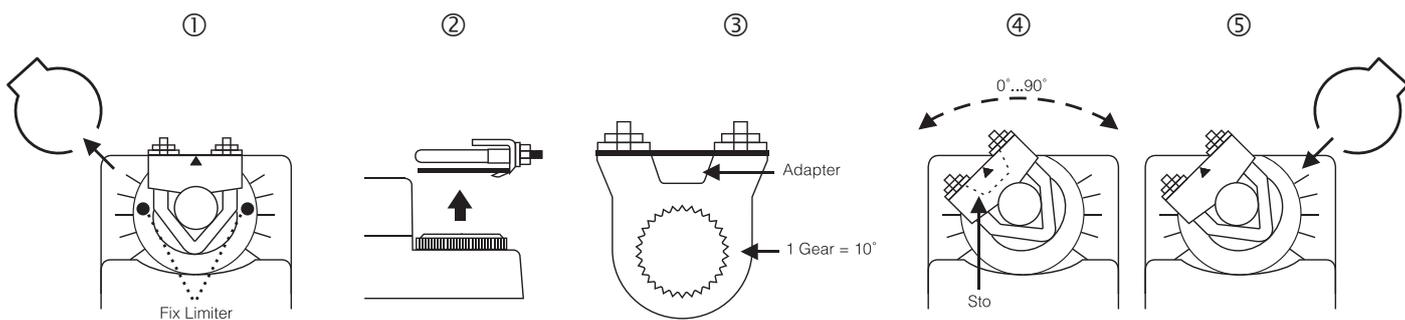
Control Signal 5 DC 0...10V
 Input Resistance Ri100k Ohm

Factory Default Setting

Control Signal 5 DC 2...10V
 Input Resistance Ri500k Ohm

On Request

LIMITING ANGLE OF ROTATION NECM...6 (S)



IMPORTANT REMARK

For special requirement, consult your local NenuTec's representative.

  This actuator includes electrical and electronic components and may not be disposed as household garbage. Please consider the local valid legislation.

 AC / DC 24 V: Connect via safety isolating transformer.
 AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

The performance specifications are nominal and conform to acceptable industry standards. NENU TEC shall not be liable for damages resulting from misapplication or misuse of its products.

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TECHNOLOGY

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Modulating Control
10 Nm

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INNOVATIVE MEMBER OF SWIS⁺TEC

NECM SERIES ELECTRONIC RETURN DAMPER ACTUATOR

Modulating Control
10 Nm

NECM...10 SERIES

NECM series actuators with Electronic Return® (ER) function are designed and produced for extended functionalities in HVAC systems: air handling equipment, fan coils and laboratory applications. Electronic Return® (ER) is able to manage short voltage interruptions for max. 10 seconds.

PRODUCT FEATURE

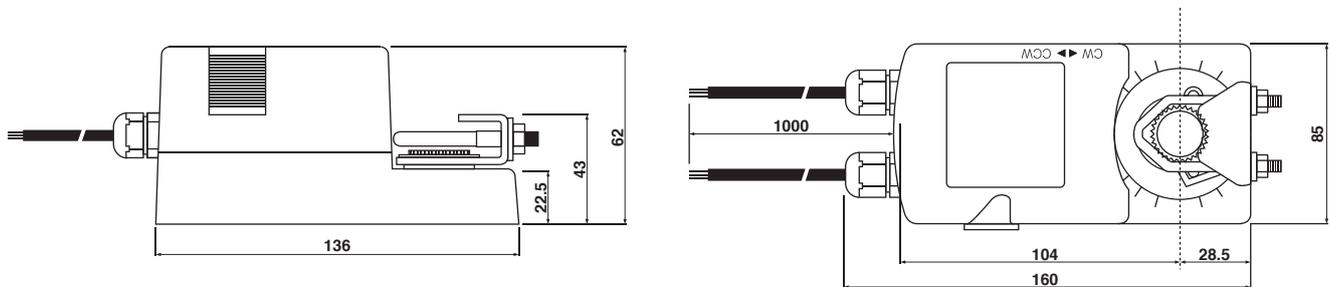


- Torque 10 Nm
- Damper size 2.0 m²
- Power supply AC/DC 24V
- Control Modulating Signal DC 0(2)...10 V / 0(4)...20 mA
- Shaft dimensions - Ø 10...20 mm / □ 5...14 mm
- Minimum Shaft Length 45 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Actuator with 1 m cable connection
- Manual Over-ride push button when required

MODEL SELECTION TABLE

MODEL /TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	RETURN	AUXILIARY SWITCH
NECM 1.1-10	10 Nm	AC/DC 24V ± 10%	65...70 sec	40 sec	-
NECM 1.1-10S	10 Nm	AC/DC 24V ± 10%	65...70 sec	40 sec	2 x SPDT (Adjustable)

DIMENSION (mm)



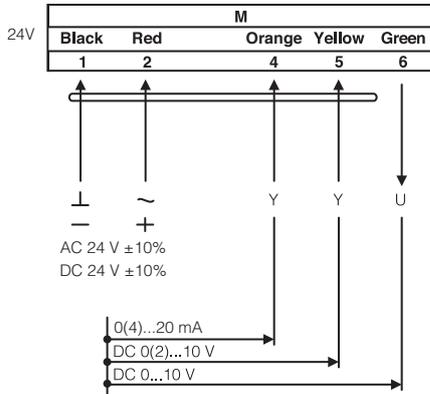
TECHNICAL SPECIFICATION

MODEL NUMBER	NECM 1.1 (S1)
TORQUE	10 Nm
DAMPER SIZE	2.0 m ²
SHAFT DIMENSION	Ø 10...20 mm / □ 5...14 mm
POWER SUPPLY	AC/DC 24 V ± 10%
FREQUENCY	50...60 Hz
CONTROL SIGNAL (INPUT)	DC 0(2)...10 V, 0(4)...20 mA
POSITION SIGNAL (OUTPUT)	DC 0...10 V
POWER CONSUMPTION	
● OPERATING	7.2 W
● END POSITION	1.2 W
FOR WIRE SIZING	10.0 VA
ELECTRICAL CONNECTION	1 m Cable
AUXILIARY SWITCH RATING	3 (1.5) A / AC 250 V
PROTECTION CLASS	Class III ⚡
ANGLE OF ROTATION	90° (95° mechanical)
WEIGHT	< 1.0 Kg
LIFE CYCLE	60,000 Rotation
SOUND LEVEL	40 dB
IP PROTECTION	IP54
OPERATING TEMPERATURE	-20°...50° as per IEC 721-3-3
NON-OPERATING TEMPERATURE	-30°...+60° C / IEC 721-3-2
AMBIENT HUMIDITY	5%...95% rH non condensing / EN
MAINTENANCE	Maintenance Free
MODE OF OPERATION	Type I / EN 60730-1
EMC	CE & ISO 9000 EN / EEC

NECM SERIES ELECTRONIC RETURN DAMPER ACTUATOR

Modulating Control
10 Nm

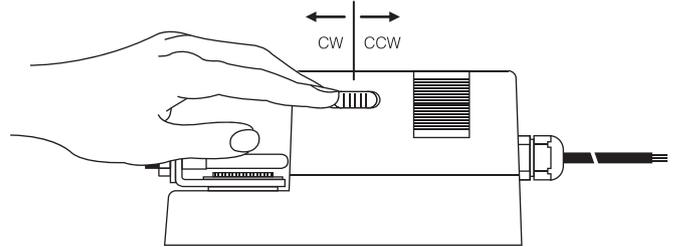
WIRING DIAGRAM NECM...10 (S1) POWER SUPPLY AC/DC 24V



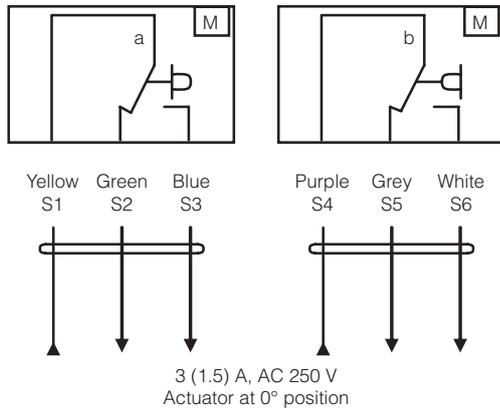
DIRECTION OF ROTATION NECM...10 (S1)

Default factory setting: CW.

Direction of rotation can be change by toggling between CW/CCW switch on the actuator's housing.



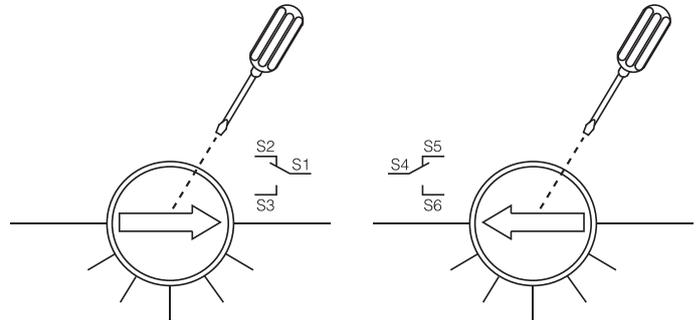
WIRING DIAGRAM NECM...10 (S1) AUXILIARY SWITCH



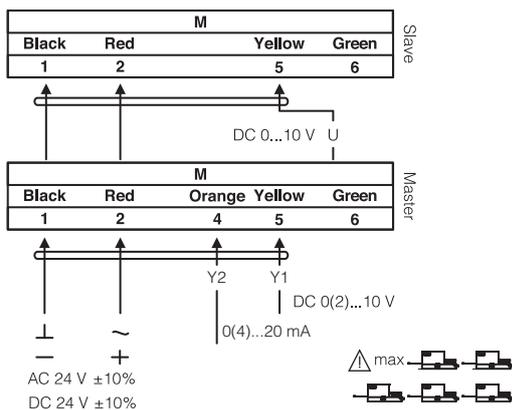
AUXILIARY SWITCH NECM...10 (S1)

Switch **a** factory-set at 5° and 85°.

The auxiliary switch can be optimally adjusted between 0°...90°.



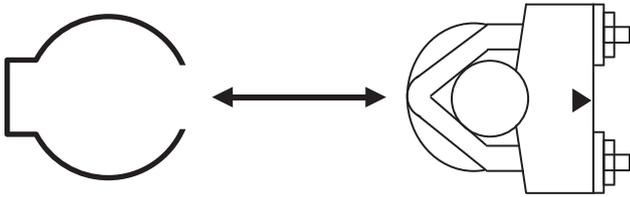
WIRING DIAGRAM NECM...10 (S1) PARALLEL CONNECTION



REMARK

During parallel operation, the output signal (terminal 6, DC 0...10 V) of the master actuator must be connected to terminal 5 of the next slave actuator.

RELEASING THE ADAPTER NECM...10 (S1)



Adjusting Control Signals NECM...10 (S1)

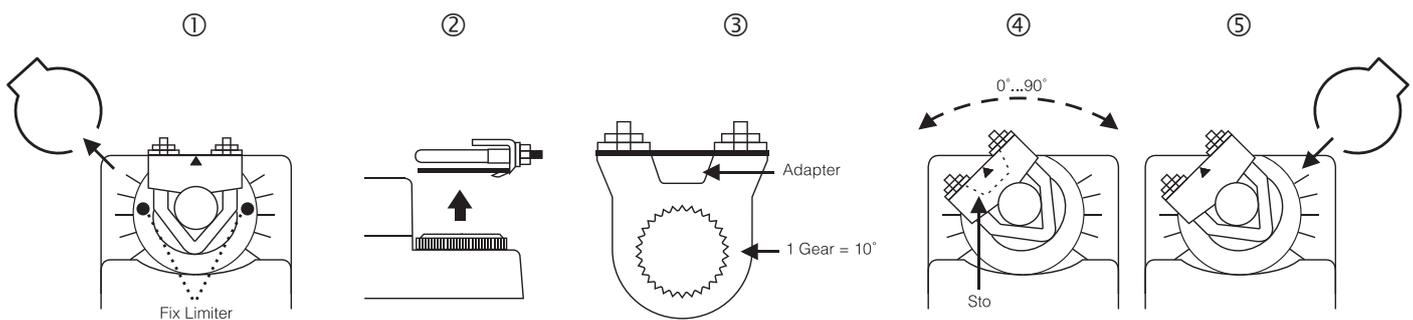
Control Signal 5 DC 0...10V
Input Resistance Ri100k Ohm

Factory Default Setting

Control Signal 5 DC 2...10V
Input Resistance Ri500k Ohm

On Request

LIMITING ANGLE OF ROTATION NECM...10 (S1)



IMPORTANT REMARK

For special requirement, consult your local NenuTec's representative.

  This actuator includes electrical and electronic components and may not be disposed as household garbage. Please consider the local valid legislation.

 AC / DC 24 V: Connect via safety isolating transformer.
AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

The performance specifications are nominal and conform to acceptable industry standards. NENUTEC shall not be liable for damages resulting from misapplication or misuse of its products.

SWISS⁺
TECHNOLOGY

NECA SERIES

ELECTRONIC RETURN DAMPER ACTUATOR

2 Point Control
10 Nm

NENUTE[®]EC

INNOVATIVE MEMBER OF SWIS⁺TEC

NECA SERIES ELECTRONIC RETURN DAMPER ACTUATOR

2 Point Control
10 Nm

NECA...10 SERIES (S1)

NECA SERIES damper actuators with Electronic Return® (ER) function are designed and produced for extended functionalities in the HVAC Systems: air handling equipment, fan coils and laboratory applications. Electronic Return® (ER) is able to manage short voltage interruptions for max. 10 seconds.

PRODUCT FEATURE

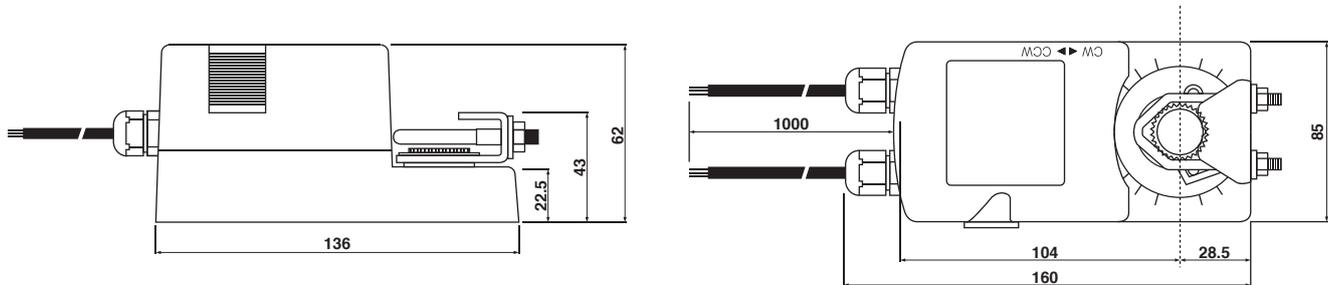


- Torque 10 Nm
- Damper size 2.0 m²
- Power supply AC/DC 24V and AC 230V
- Shaft dimensions - Ø 10...20 mm / □ 5...14 mm
- Minimum Shaft Length 40 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Actuator with 1 m cable connection
- Optional 1 Adjustable SPDT auxiliary switch
- Manual Over-ride push button when required

MODEL SELECTION TABLE

MODEL /TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	RETURN	AUXILIARY SWITCH
NECA 1-10	10 Nm	AC/DC 24V ± 10%	65...70 sec	40 sec	-
NECA 1-10S	10 Nm	AC/DC 24V ± 10%	65...70 sec	40 sec	2 x SPDT (Adjustable)
NECA 2-10	10 Nm	AC 230V ± 10%	65...70 sec	40 sec	-
NECA 2-10S	10 Nm	AC 230V ± 10%	65...70 sec	40 sec	2 x SPDT (Adjustable)

DIMENSION (mm)



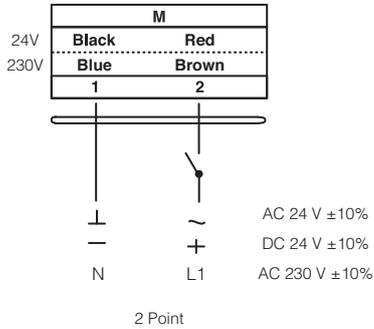
TECHNICAL SPECIFICATION

MODEL NUMBER	NECA 1-10 (S1)	NECA 2-10 (S1)
TORQUE	10 Nm	10 Nm
DAMPER SIZE	2.0 m ²	2.0 m ²
SHAFT DIMENSION	Ø 10...20 mm / □ 5...14 mm	Ø 10...20 mm / □ 5...14 mm
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2 point control	2 point control
POWER CONSUMPTION		
● OPERATING	7.2 W	7.2 W
● END POSITION	1.2 W	1.2 W
FOR WIRE SIZING	10.0 VA	10.0 VA
ELECTRICAL CONNECTION	1 m Cable	1 m Cable
AUXILIARY SWITCH RATING	3 (1.5) A / AC 250 V	3 (1.5) A / AC 250 V
PROTECTION CLASS	Class III ⚡	Class II ⚡
ANGLE OF ROTATION	90° (95° mechanical)	90° (95° mechanical)
WEIGHT	1.8 Kg	1.8 Kg
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	< 45 dB (A)	< 45 dB (A)
IP PROTECTION	IP54	IP54
OPERATING TEMPERATURE	-20°...50° as per IEC 721-3-3	-20°...50° as per IEC 721-3-3
NON-OPERATING TEMPERATURE	-30°...+60° C / IEC 721-3-2	-30°...+60° C / IEC 721-3-2
AMBIENT HUMIDITY	5%...95% rH non condensing / EN	5%...95% rH non condensing / EN
MAINTENANCE	Maintenance Free	Maintenance Free
MODE OF OPERATION	Type I / EN 60730-1	Type I / EN 60730-1
EMC	CE & ISO 9000 EN / EEC	CE & ISO 9000 EN / EEC

NECA SERIES ELECTRONIC RETURN DAMPER ACTUATOR

2 Point Control
10 Nm

WIRING DIAGRAM NECA...10 (S1) POWER SUPPLY AC/DC 24 V / AC 230V

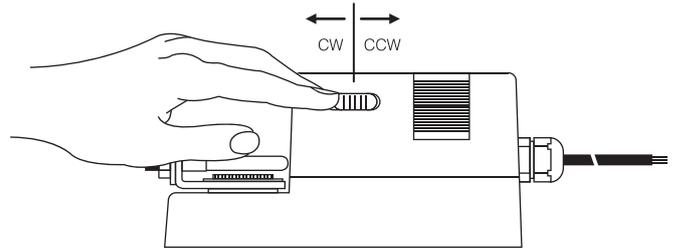


⚠ Connect via safety isolating transformer

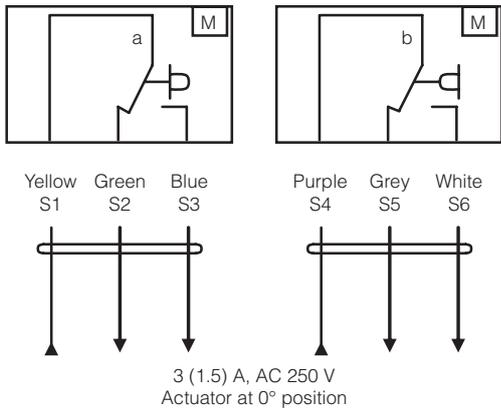
DIRECTION OF ROTATION NECA...10 (S1)

Default factory setting: CW.

Direction of rotation can be change by toggling between CW/CCW switch on the actuator's housing.



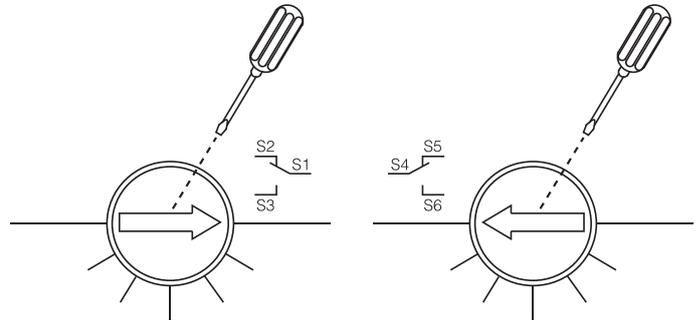
WIRING DIAGRAM NECA...10 (S1) AUXILIARY SWITCH



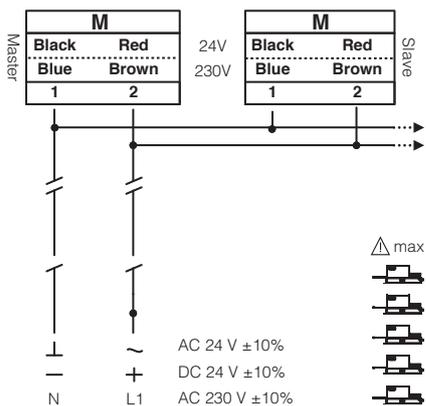
AUXILIARY SWITCH NECA...10 (S1)

Switch **a** factory-set at 5° and 85°.

The auxiliary switch can be optimally adjusted between 0°...90°.



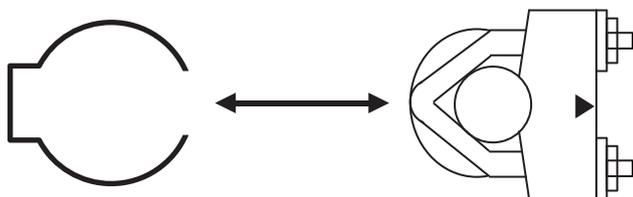
WIRING DIAGRAM NECA...10 (S1) PARALLEL CONNECTION



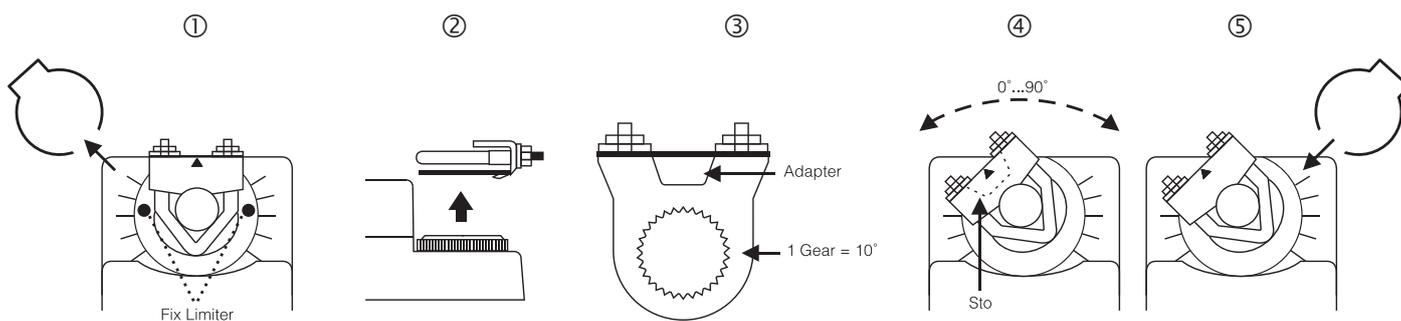
REMARK

Parallel connection of NECA...10 actuators are limited to 5. Power consumption must be observe.

RELEASING THE ADAPTER NECA...10 (S1)



LIMITING ANGLE OF ROTATION NECA...10 (S1)



IMPORTANT REMARK

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  This actuator includes electrical and electronic components and may not be disposed as household garbage. Please consider the local valid legislation.

 AC / DC 24 V: Connect via safety isolating transformer.
AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

The performance specifications are nominal and conform to acceptable industry standards. Nenutec shall not be liable for damages resulting from misapplication or misuse of its products.

NECA SERIES
ELECTRONIC RETURN DAMPER ACTUATOR

2 Point Control
20 Nm

NENUTE[®]EC

INNOVATIVE MEMBER OF SWIS⁺TEC

NECA SERIES

ELECTRONIC RETURN DAMPER ACTUATOR

2 Point Control
20 Nm

NECA...20 SERIES (S)

NECA SERIES damper actuators with Electronic Return® (ER) function are designed and produced for extended functionalities in the HVAC Systems: air handling equipment, fan coils and laboratory applications. Electronic Return® (ER) is able to manage short voltage interruptions for max. 10 seconds.



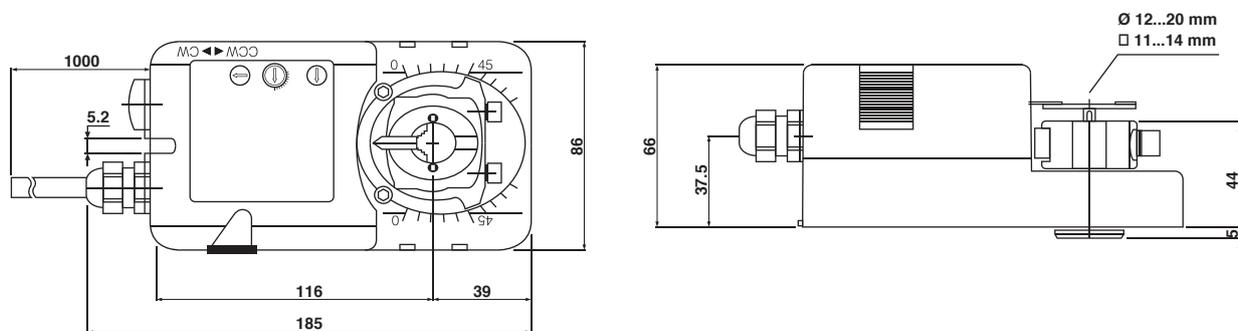
PRODUCT FEATURE

- Torque 20 Nm
- Damper size 4.0 m²
- Power supply AC/DC 24V and AC 230V
- Shaft dimensions - Ø 12...20 mm / □ 11...14 mm
- Minimum Shaft Length 45 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Actuator with 1 m cable connection
- Optional 2 Adjustable SPDT auxiliary switches
- Manual Over-ride push button when required

MODEL SELECTION TABLE

MODEL /TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	RETURN	AUXILIARY SWITCH
NECA 1-20	20 Nm	AC/DC 24V ± 10%	90...100 sec	70 sec	-
NECA 1-20S	20 Nm	AC/DC 24V ± 10%	90...100 sec	70 sec	2 x SPDT (Adjustable)
NECA 2-20	20 Nm	AC 230V ± 10%	90...100 sec	70 sec	-
NECA 2-20S	20 Nm	AC 230V ± 10%	90...100 sec	70 sec	2 x SPDT (Adjustable)

DIMENSION (mm)



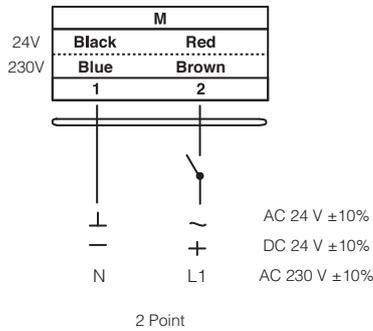
TECHNICAL SPECIFICATION

MODEL NUMBER	NECA 1-20 (S)	NECA 2-20 (S)
TORQUE	20 Nm	20 Nm
DAMPER SIZE	4.0 m ²	4.0 m ²
SHAFT DIMENSION	Ø 12...20 mm / □ 11...14 mm	Ø 12...20 mm / □ 11...14 mm
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2 point control	2 point control
POWER CONSUMPTION		
● OPERATING	7.2 W	7.2 W
● END POSITION	1.2 W	1.2 W
FOR WIRE SIZING	10.0 VA	10.0 VA
ELECTRICAL CONNECTION	1 m Cable	1 m Cable
AUXILIARY SWITCHES RATING	3 (1.5) A, AC 250 V	3 (1.5) A, AC 250 V
PROTECTION CLASS	Class III ⚡	Class II ⚡
ANGLE OF ROTATION	90° (95° mechanical)	90° (95° mechanical)
WEIGHT	1.2 Kg	1.2 Kg
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	< 45 dB (A)	< 45 dB (A)
IP PROTECTION	IP54	IP54
OPERATING TEMPERATURE	-20°...50° as per IEC 721-3-3	-20°...50° as per IEC 721-3-3
NON-OPERATING TEMPERATURE	-30°...+60° C / IEC 721-3-2	-30°...+60° C / IEC 721-3-2
AMBIENT HUMIDITY	5%...95% rH non condensing / EN	5%...95% rH non condensing / EN
MAINTENANCE	Maintenance Free	Maintenance Free
MODE OF OPERATION	Type I / EN 60730-1	Type I / EN 60730-1
EMC	CE & ISO 9000 EN / EEC	CE & ISO 9000 EN / EEC

NECA SERIES ELECTRONIC RETURN DAMPER ACTUATOR

2 Point Control
20 Nm

WIRING DIAGRAM NECA...20 (S) POWER SUPPLY AC/DC 24 V / AC 230V

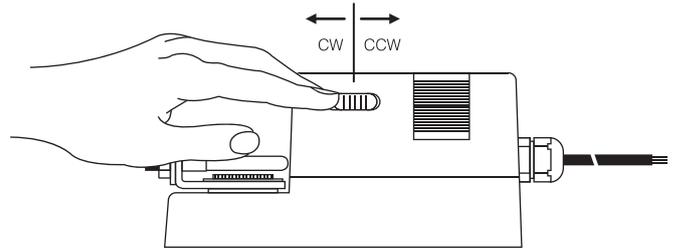


⚠ Connect via safety isolating transformer

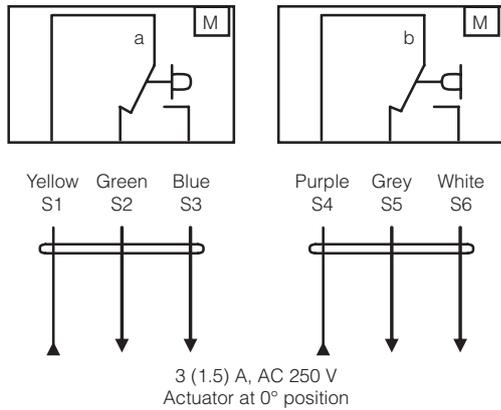
DIRECTION OF ROTATION NECA...20 (S)

Default factory setting: CW.

Direction of rotation can be change by toggling between CW/CCW switch on the actuator's housing.



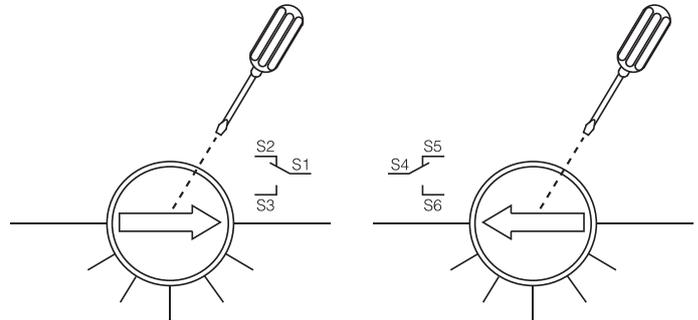
WIRING DIAGRAM NECA...20 (S) AUXILIARY SWITCH



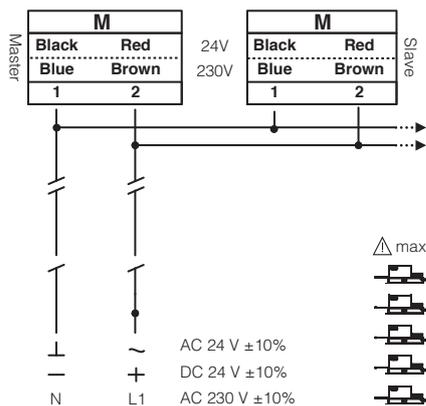
AUXILIARY SWITCH NECA...20 (S)

Switch **a** factory-set at 5° and 85°.

The auxiliary switch can be optimally adjusted between 0°...90°.



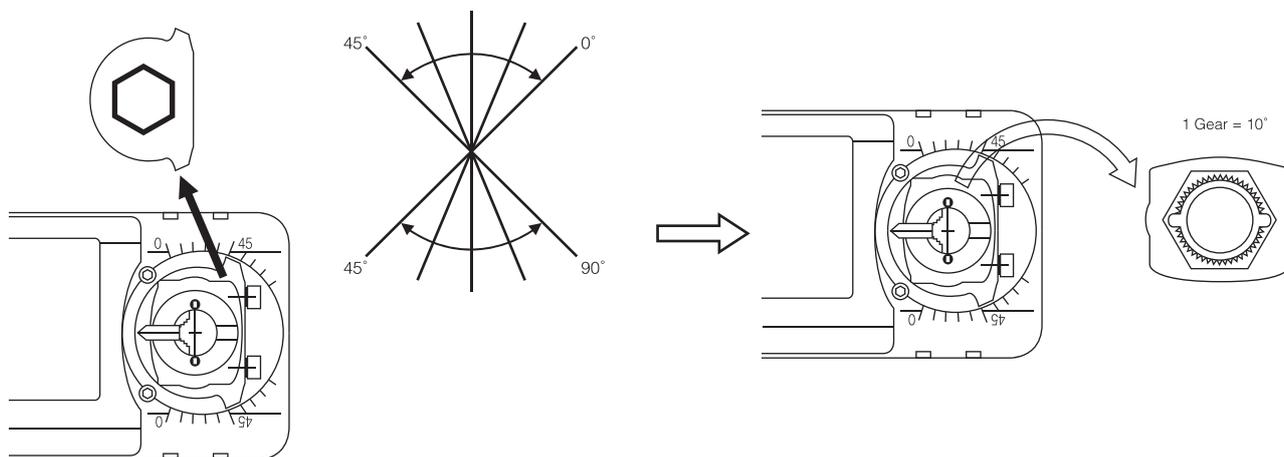
WIRING DIAGRAM NECA...20 (S) PARALLEL CONNECTION



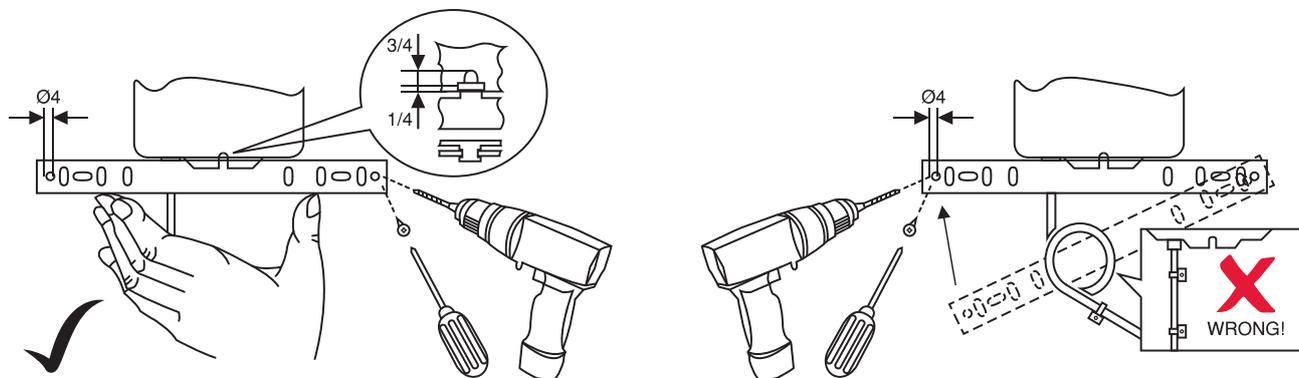
REMARK

Parallel connection of NECA...20 actuators are limited to 5. Power consumption must be observe.

ANGLE OF ROTATION LIMITING



INSTALLATION / MOUNTING INSTRUCTION



IMPORTANT REMARK

For special requirement, consult your local Nenutec's representative.

  This actuator includes electrical and electronic components and may not be disposed as household garbage. Please consider the local valid legislation.

 AC / DC 24 V: Connect via safety isolating transformer.
AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

The performance specifications are nominal and conform to acceptable industry standards. Nenutec shall not be liable for damages resulting from misapplication or misuse of its products.

SWISS⁺
TECHNOLOGY

NECM SERIES **ELECTRONIC RETURN DAMPER ACTUATOR**

Modulating Control
20 Nm

NENUTE[®]EC

INNOVATIVE MEMBER OF SWIS⁺TEC

NECM SERIES ELECTRONIC RETURN DAMPER ACTUATOR

Modulating Control
20 Nm

NECM...20 SERIES (S)

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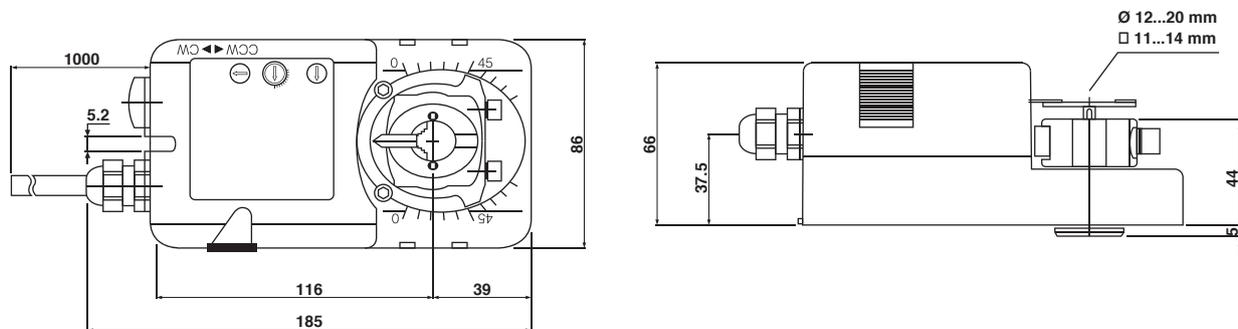
PRODUCT FEATURE

- Torque 20 Nm
- Damper size 4.0 m²
- Power supply AC/DC 24V
- Control Modulating Signal DC 0(2)...10 V / 0(4)...20 mA
- Shaft dimensions - Ø 12...20 mm / □ 11...14 mm
- Minimum Shaft Length 40 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Actuator with 1 m cable connection
- Optional 2 Adjustable SPDT auxiliary switches
- Manual Over-ride push button when required

MODEL SELECTION TABLE

MODEL /TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	RETURN	AUXILIARY SWITCH
NECM 1.1-20	20 Nm	AC/DC 24V ± 10%	90...100 sec	70 sec	-
NECM 1.1-20S	20 Nm	AC/DC 24V ± 10%	90...100 sec	70 sec	2 x SPDT (Adjustable)

DIMENSION (mm)



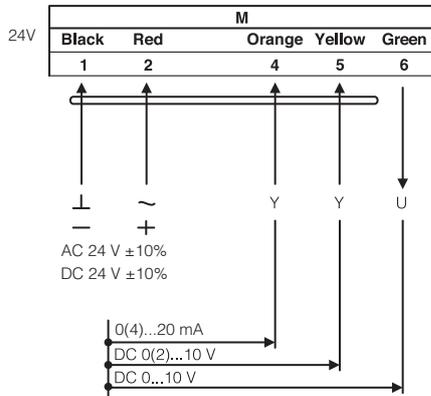
TECHNICAL SPECIFICATION

MODEL NUMBER	NECM 1.1-20 (S)
TORQUE	20 Nm
DAMPER SIZE	4.0 m ²
SHAFT DIMENSION	Ø 12...20 mm / □ 11...14 mm
POWER SUPPLY	AC/DC 24 V ± 10%
FREQUENCY	50...60 Hz
CONTROL SIGNAL (INPUT)	DC 0(2)...10 V / 0(4)...20 mA
POSITION SIGNAL (OUTPUT)	DC 0...10 V
POWER CONSUMPTION	
● OPERATING	7.2 W
● END POSITION	1.2 W
FOR WIRE SIZING	8.0 VA
ELECTRICAL CONNECTION	1 m Cable
PROTECTION CLASS	Class III ⚡
ANGLE OF ROTATION	90° (95° mechanical)
WEIGHT	1.2 Kg
LIFE CYCLE	60,000 Rotation
SOUND LEVEL	40 dB
IP PROTECTION	IP54
OPERATING TEMPERATURE	-20°...50° as per IEC 721-3-3
NON-OPERATING TEMPERATURE	-30°...+60° C / IEC 721-3-2
AMBIENT HUMIDITY	5%...95% rH non condensing / EN
MAINTENANCE	Maintenance Free
MODE OF OPERATION	Type I / EN 60730-1
EMC	CE & ISO 9000 EN / EEC

NECM SERIES ELECTRONIC RETURN DAMPER ACTUATOR

Modulating Control
20 Nm

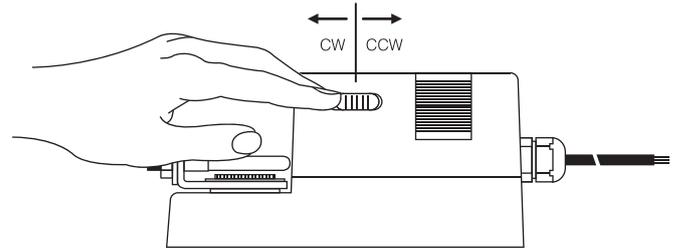
WIRING DIAGRAM NECM...20 (S) POWER SUPPLY AC/DC 24V



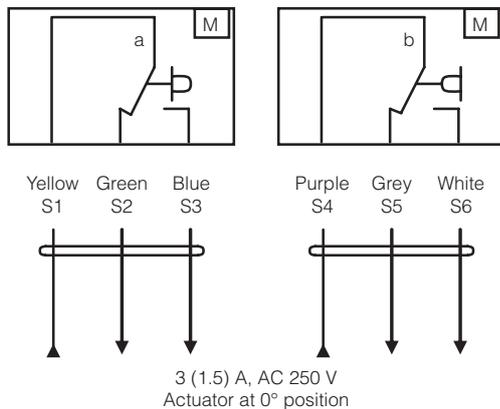
DIRECTION OF ROTATION NECM...20 (S)

Default factory setting: CW.

Direction of rotation can be change by toggling between CW/CCW switch on the actuator's housing.



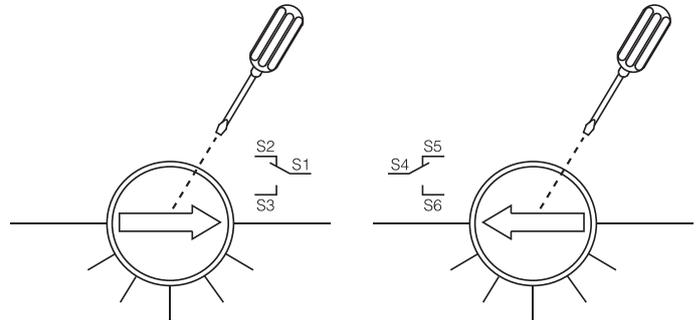
WIRING DIAGRAM NECM...20 (S) AUXILIARY SWITCH



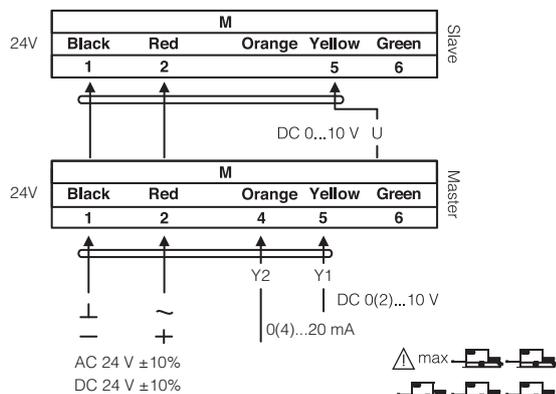
AUXILIARY SWITCH NECM...20 (S)

Switch **a** factory-set at 5° and 85°.

The auxiliary switch can be optimally adjusted between 0°...90°.



WIRING DIAGRAM NECM...20 (S) PARALLEL CONNECTION



REMARK

During parallel operation, the output signal (terminal 6, DC 0...10 V) of the master actuator must be connected to terminal 5 of the next slave actuator.

ADJUSTING CONTROL SIGNALS NECM...20 (S)

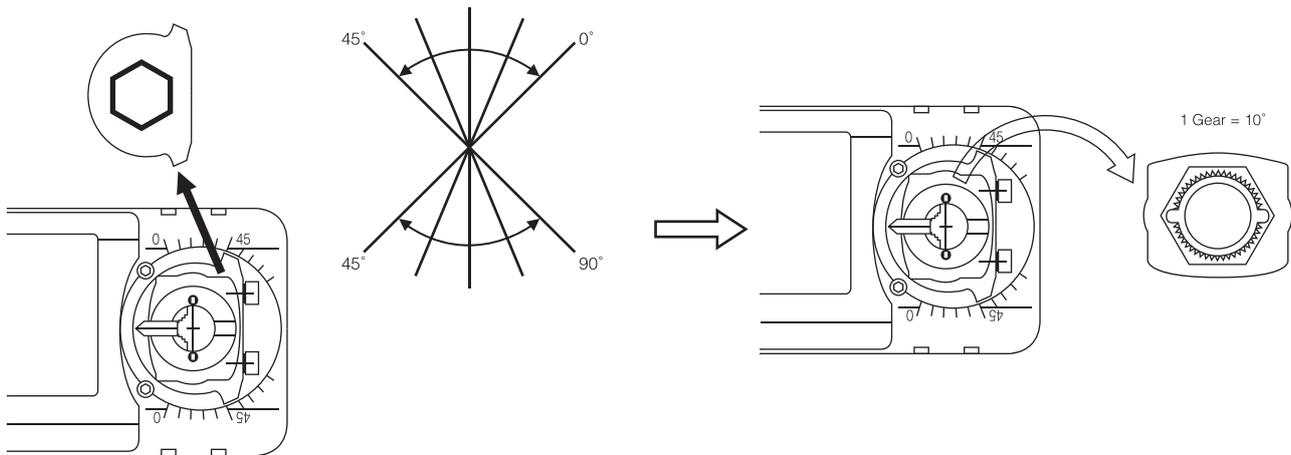
Control Signal 5 DC 0...10V
Input Resistance Ri100k Ohm

Factory Default Setting

Control Signal 5 DC 2...10V
Input Resistance Ri500k Ohm

On Request

ANGLE OF ROTATION LIMITING



IMPORTANT REMARK

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AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

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